

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A process for the production of mono-dispersed, spherical, nonporous ~~spherical~~ SiO₂ particles by hydrolytic polycondensation of tetraalkoxysilanes and/or organotrialkoxysilanes, said process comprising:
conducting said hydrolytic polycondensation of tetraalkoxysilanes and/or organotrialkoxysilanes in a medium comprising water, one or more solubilizers, and ethanolamine ~~aminoethanol or ethylenediamine~~.
2. (Previously Presented): A process according to Claim 1, wherein a sol of primary particles is first produced, and the resultant SiO₂ particles are subsequently brought to the desired particle size in such a way that further nucleation is prevented by continuous metered addition of corresponding silane controlled to the extent of reaction.
3. (Cancelled):
4. (Cancelled):
5. (Cancelled):
6. (Currently Amended): A process according to Claim 1, wherein the proportion of ethanolamine ~~or ethylenediamine~~ in the medium is from 0.1 to 5% by weight.
7. (Previously Presented): A process according to Claim 1, wherein the one or more solubilizers are in each case an alcohol, a ketone, a dialkyl sulfoxide, a pyrrolidone, an alkyl nitrile, a furan, or a dioxane.
8. (Previously Presented): A process according to Claim 1, wherein the alkoxy

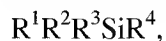
group of the tetraalkoxysilane is in each case a methoxy, ethoxy, propoxy, butoxy or pentoxy group.

9. (Previously Presented): A process according to Claim 1, wherein the hydrolytic polycondensation is carried out at temperatures between 25 and 78°C.

10. (Previously Presented): A process according to Claim 1, wherein one or more dyes are additionally added to the medium during the hydrolytic polycondensation.

11. (Previously Presented): A process according to Claim 10, wherein said dye is a fluorescent dye.

12. (Currently Amended): A process according to Claim 10, wherein said dye is a terminally silylated fluorescent (~~fluorescent~~) dye of the formula:



in which

R^1 , R^2 and R^3 are identical or different and stand for halogen atoms, alkyl, aryl, alkoxy or silyloxy groups,

R^4 has the complex structure $A^1-B_m-C_n-A^2$,

m and n are each zero or 1,

A^1 is an alkylene chain or a heteroanalogous structure,

B is a functional sequence,

C is a bifunctional organic sequence having a chain or ring structure which is linked to A^2 , and

A^2 is a fluorophoric system or a dye molecule which is bonded to C or, if n is equal to zero, is bonded to B or, if m and n are both equal to zero, is bonded to A^1 .

13. (Previously Presented): A process according to Claim 12, wherein the functional sequence B in R^4 is carbonyl, oxycarbonyl, aminocarbonyl, aminothiocarbonyl, or a hetero atom.

14. (Previously Presented): A process according to Claim 12, wherein the bifunctional sequence C in R⁴ is an alkylene unit, a substituted alkylene unit, or a heteroanalogous alkylene unit, which in each case is linked to A² via a carbon, nitrogen, oxygen or sulfur atom.

15. (Previously Presented): A process according to Claim 12, wherein the bifunctional sequence C in R⁴ is a hydroxy- or aminocarboxylic acid radical, or an ester or amide thereof.

16. (Previously Presented): A process according to Claim 12, wherein the alkoxy group is a methoxy, ethoxy, propoxy, butoxy or pentoxy group.

17. (Currently Amended): A powder consisting of mono-dispersed, spherical, nonporous spherical SiO₂ particles obtainable by a process according to Claim 1.

18. (Previously Presented): A powder according to Claim 17, wherein the SiO₂ particles have a mean particle diameter of between 0.05 and 10 µm.

19. (Currently Amended): A material for use as sorption material in chromatography, in isolation and purification of nucleic acids and proteins, in phagocytosis analyses, as constituents in diagnostic arrays, as solid phases for the investigation of molecular recognition phenomena, as solid phases in heterogeneously catalysed processes, as a component of photonic crystals, or and as lubricants and/or polishing agents, wherein said material is a product obtained by the process according to claim 1.

20. (Currently Amended): A process according to Claim 1, wherein the proportion of ethanolamine ~~amino-ethanol or ethylenediamine~~ ~~the amine~~ in the medium is from 0.5 to 2% by weight.

21. (Currently Amended): A process according to Claim 1, wherein the proportion of ethanolamine ~~amino-ethanol or ethylenediamine~~ ~~the amine~~ in the medium is from

0.5 to 3% by weight.

22. (Previously Presented): A process according to Claim 1, wherein the hydrolytic polycondensation is carried out at temperatures between 30 and 75°C

23. (Previously Presented): A process according to Claim 1, wherein the hydrolytic polycondensation is carried out at temperatures between 40 and 55°C.

24. (Previously Presented): A process according to Claim 13, wherein the functional sequence B in R⁴ is carbonyl, oxycarbonyl, aminocarbonyl, aminothiocabonyl, oxygen, nitrogen or sulfur.

25. (Previously Presented): A process according to Claim 12, wherein m is 1, and the functional sequence B in R⁴ is carbonyl, oxycarbonyl, aminocarbonyl, aminothiocabonyl, or a hetero atom.

26. (Previously Presented): A process according to Claim 12, wherein n is 1, and the bifunctional sequence C in R⁴ is a hydroxy- or aminocarboxylic acid radical, or an ester or amide thereof.

27. (Currently Amended): A process according to Claim 1, wherein said medium contains 2 – 25 % by weight water, 0.1-5 % by weight ethanolamine ~~or ethylenediamine~~, 70-90 % by weight solubilizers, and 2-40 % by weight tetraalkoxysilane ~~tetraalkoxysilane~~, based on the total weight of the medium.

28. (Currently Amended): A process according to Claim 1, wherein said medium contains 2 – 25 % by weight water, 0.5-3 % by weight ethanolamine ~~or ethylenediamine~~, 70-90 % by weight solubilizers, and 5-15 % by weight tetraalkoxysilane ~~tetraalkoxysilane~~, based on the total weight of the medium.